Wei-Cheng Chen

Contact Information

2F., No.450-1, Zhongzheng Rd., Shilin Dist., Taipei City 111, Taiwan (R.O.C.)
Home: +886-2-2833-2167 | Mobile: +886-988-787-232
Email: jimmy.weicc@gmail.com
Website: https://weijchen.github.io/

Education

National Taiwan University of Science and Technology (NTUST), Taiwan
On-the-job training GPA: 3.88/4.0 Sep 2017 - Jun 2019

- CS2002301 Data Structures
- CS3009302 Operating Systems
- CS4001301 Programming Languages
- CS2006302 Computer Organization
- CS5013701 Neural Networks

Fu Jen Catholic University (FJU), Taiwan
On-the-job training GPA: 4.0/4.0 Sep 2018 - Jun 2019

- D310101863 Introduction to Computer Science
- D511202766 Linear Algebra
- D740304619 Algorithms

National Taiwan Normal University (NTNU), Taiwan
On-the-job training GPA: 4.0/4.0 Feb 2019 - Jun 2019

- CSU0011 Algorithms

National Taiwan University (NTU), Taiwan
B.S., in Economics Sep 2011 - Jun 2015

Research Experience

Strategic Networking and Communications Lab, Academia Sinica, Taiwan
Research Assistant Feb 2018 - present
Advisor: Dr. Chih-Yu Wang

- Project: Query forecasting with e-commerce platform data
  - Employed sessions of Mandarin/English query data from e-commerce platform which has more than millions of records and implemented textual embedded techniques (word2vec) for query mining and suggestion.
  - Analyzed and proposed ML/DL framework (NN, RNN-LSTM) for the modeling which yields a superior result that improves the baseline's F1 score by 30-40%.

Wireless Communications Lab, Academia Sinica, Taiwan Jan 2017 - Feb 2018
Research Assistant
Advisor: Dr. Wei-Ho Chung

- Project 1: Financial prediction using social network data
  - Proposed a forecasting solution which utilized the information from social media and Natural Language Preprocessing (NLP) techniques and satisfied the barrier of data collecting under the semi-supervised framework.
  - Applied technical analysis to capture abnormal fluctuation and to enhance the model's efficiency and simulation results which verify the superiority of the proposed method.
- Project 2: Financial derivative pricing on short-term contract
  - Proposed a compound and low-effort approach for short-term option contract pricing via Auto Regressive (AR) process and Monte Carlo Simulations (MCS).
  - Analyzed and provided a comparable result of the root mean square error (RMSE) of the proposed scheme.

Publications

[J1] **W. -C. Chen**, and W. -H. Chung, "Perception of Market Sentiment: Stock Movement Prediction via Sentiment Analysis and Social Network Data," *submitted to IEEE Systems Journal.*

[C2] **W. -C. Chen**, and C. -Y. Wang *et al.*, "PSAC: Context-based Purchase Prediction Framework via User's Sequential Actions," *ECOM'19 The SIGIR 2019 Workshop on eCommerce.*

[C1] **W. -C. Chen**, and W. -H. Chung, "Option Pricing via Multi-path Autoregressive Monte Carlo Approach," *61st Meeting of EURO Working Group for Commodities and Financial Modelling (EWGCFM).*

Work Experience

Mandatory Military Service, Taiwan — Dec 2015 - Dec 2016
Marine corps

EverGrow Securities Investment Consulting Co. Ltd., Taiwan
Research Assistant (Internship) — Sep 2014 - Jun 2015

- Analyzed Macro-economic through Bloomberg and Excel, mainly focusing on individual regions' raw data and policies, and gathered into daily/weekly reviews to evaluate the investment potentials.
- Proposed reports on specific financial and investment issues, such as China's macro-economy outlook, ASEAN's economic forecast and the research on dollar cost averaging investment method.

Leadership Experience

KDD Cup 2019: Context-Aware Multi-Modal Transportation Recomm., May 2019 - Jun 2019
ACM Special Interest Group on Knowledge Discovery and Data Mining

- Attained the top quartile position (443/1696) at the end of the first phase of the contest.
- Implemented a complete system that utilizes various machine learning/deep learning framework to forecast user's transportation preference, e.g., XGBoost, LightGBM, NN, RNN, and SVM.
- Source code: https://gitlab.com/weijchen/kdd-cup-2019

Second Place, Future Elite Leadership Awards, Taiwan — Aug 2014 - Nov 2014
Taiwan Best Financial Planner Election held by RFPI and Yuanta commercial bank Co., Ltd.

- Collaborated with other five members from National Taiwan University (NTU) and National Chengchi University (NCCU) and achieved second prize among over 40 teams, with total score 452/500 at the final stage and became the only team consists of bachelor students in the top three.
- Evaluated the feasibilities based on customer's family background and lifetime financial targets to compose asset allocation choice with mutual funds and monetary tools.

Collaborator, NTU — Oct 2013 - Feb 2015
Cofounder and Club leader

- Initiated the club with ten partners out of scratch and recruited over 40 members within six months.
- Conducted monthly projects focusing on economic issues or industries, including the outline of the US shale oil industry, the trend forecast of EUR after quantitative easing (QE), and FED's monetary policy analysis.

Securities Research Society, NTU — Sep 2012 - Feb 2014
Minister of Academic Department

- Administered society's academic issues, including curriculum arrangement reformation, school festival affairs, club recruitment fair, and winter camp's activities.

Skills

Programming

- Python, Bash, C++/C, Java, HTML/CSS/JavaScript, MIPS, Common Lisp, Prolog

Analytics

- TensorFlow, Keras, IPython, SQL, Excel/VBA

Computer Skills

- LaTeX, Unix/Linux